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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/735,105	12/11/2003	Hiroshi Yamamoto	112780-039	1880
43793	7590	06/03/2005	EXAMINER	
EVEREST INTELLECTUAL PROPERTY LAW GROUP			PEAVEY, ENOCH E	
P. O. BOX 708			ART UNIT	
NORTHBROOK, IL 60065			PAPER NUMBER	

3676

DATE MAILED: 06/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/735,105	YAMAMOTO, HIROSHI	
	Examiner	Art Unit	
	Enoch E Peavey	3676	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 March 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

Claim Rejections - 35 USC § 103

I. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

A. Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shrontz et al., US No. 5,165,699 ("Shrontz") as a matter of optimization.

i. Shrontz discloses a sliding contact seal structure comprising a shaft member having a sliding contact surface (42, made of chromium oxide) that comes into contact with a seal member (30) and relatively slides with respect to the seal member (30).

ii. The sliding contact surface has a surface energy (generally all surfaces exhibit a surface energy). The seal (30) has a sliding contact surface, which is defined to have a surface energy and slidingly contacts the sliding contact surface of the shaft member.

iii. The sliding contact surface of the shaft member comprises a film (Col. 6, line 34 of chromium oxide).

iv. Examiner Note: Chromium oxide coating generally has a surface energy within the range as claimed by applicant; this is evidence by US No. 5,979,314 to White.

Further, the rubber of Shrontz is also generally within a range in where the combined surface energy of the sliding contact surface and the seal member will not exceed 95

dyne/cm. Also, how the film of the shaft member is formed is given little patentable weight because it represents a process limitation within a product claim.

v. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the coating to insure that it was in a range of 50dyne/cm or less and to make the sum of the surface energy of the seal member and the sliding contact surface 95 dyne/cm or less to find the optimum range in which desirable wear resistance occurs, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involve only routine skill in the art. *In re Aller*, 220 F.2d 454, 456, 105 USPQ 233,235 (CCPA 1955)

Response to Arguments

II. Examiner agrees with applicant's arguments with regard to the appropriateness of the previous rejection reciting inherency as part of its basis. However, the claims are still considered to be unpatentable as a matter of optimization.


III. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Enoch E Peavey whose telephone number is (571) 272-7061. The examiner can normally be reached on Mon-Fri 8:00 am to 4:30 am.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Heather Shackelford can be reached on (571) 272-7049. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 3676

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Enoch E Peavey
Primary Examiner
Art Unit 3676



May 27, 2005